

III. AMENDMENTS TO THE CLAIMS

Claims 1-9. (canceled)

Claim 10. (currently amended) A method for processing used and manufacturing scrap asphalt shingle material having an aggregate layer, the method comprising the steps of:

(A) shredding the asphalt shingle material to a first maximum size;

(B) separating the shredded material into (i) fine material having an asphalt-aggregate

composition comprising both asphalt pieces and aggregate and (ii) coarse material; and

(C) forwarding (i) the fine material to a first asphalt-aggregate composition finished-product processing line and (ii) the coarse material to a second finished-product processing line.

Claim 11. (previously presented) The method as defined in claim 10 further comprising the steps of:

(D) establishing a target asphalt-aggregate ratio; and

(E) setting the ratio of fine material to coarse material resulting from said separating step towards obtaining said target asphalt-aggregate ratio in the fine material.

Claim 12. (previously presented) The method as defined in claim 11 further comprising the steps of:

(F) providing a screen element for accomplishing said separating step, said screen element having an adjustable asphalt-aggregate fall-through rate; and

(G) adjusting said fall-through rate towards obtaining said target asphalt-aggregate ratio in the fine material.

Claim 13. (previously presented) The method as defined in claim 12 in which said screen element is positioned at an angle from horizontal, and said adjusting step includes one of:

- (i) adjusting the angle of the screen element,
- (ii) providing the screen element with variable-sized openings through which the asphalt-aggregate composition falls, and adjusting the size of said openings, and
- (iii) providing the screen element with first and second interchangeable screens having different size openings, and selecting one of said first and second screens for use in the screen element during said separating step.

Claim 14. (previously presented) The method as defined in claim 10 further comprising the steps of:

- (D) establishing a target asphalt-aggregate ratio; and
- (E) adding aggregate to the fine material towards obtaining said target asphalt-aggregate ratio in the fine material.

Claim 15. (previously presented) The method as defined in claim 10 further comprising the steps of:

- (D) establishing a target asphalt-aggregate ratio; and
- (E) setting the first maximum size of shredded material resulting from said shredding step towards obtaining said target ratio in the fine material.

Claim 16. (previously presented) The method as defined in claim 10 in which the asphalt-aggregate ratio of the fine material is between approximately 30% to 70% by volume.

Claim 17. (previously presented) The method as defined in claim 10 in which the asphalt-aggregate ratio of the fine material is approximately 50-50 by weight.

Claim 18. (previously presented) The method as defined in claim 10 in which said separating step includes separating the shredded material into fine material having a maximum size of between one-half (1/2) inch to one and one-half (1 1/2) inches.

Claim 19. (previously presented) The method as defined in claim 10 in which the first maximum size of the shredded material is between approximately one (1) inch to four (4) inches.

Claim 20. (previously presented) The method as defined in claim 19 in which said first maximum size is between approximately two (2) inches to three (3) inches.

Claim 21. (previously presented) The method as defined in claim 10 further comprising the steps of:

(D) establishing a target ratio of fine material to coarse material; and

(E) setting said first maximum size of shredded material towards obtaining said target ratio.

Claim 22. (previously presented) The method as defined in claim 10 further comprising the steps of:

(D) establishing a target ratio of fine material to coarse material;

(E) providing a screen element for accomplishing said separating step, said screen element having an adjustable fine material fall-through rate; and

(F) adjusting said fall-through rate towards obtaining said target ratio of fine material to coarse material.

Claim 23. (previously presented) The method as defined in claim 22 in which said screen element is positioned at an angle from horizontal, and said adjusting step includes one of:

- (i) adjusting the angle of the screen element,
- (ii) providing the screen element with variable-sized openings through which the fine material falls, and adjusting the size of said openings, and
- (iii) providing the screen element with first and second interchangeable screens having different size openings, and selecting one of said first and second screens for use in said screen element during said separating step.

Claim 24. (currently amended) A method for processing used and manufacturable scrap asphalt shingle material having an aggregate layer, the method comprising the steps of:

- (A) establishing a target asphalt-aggregate ratio;
- (B) shredding the asphalt shingle material to a first maximum size;
- (C) separating the shredded material into (i) fine material having an asphalt-aggregate composition comprising both asphalt pieces and aggregate and (ii) coarse material; and
- (D) controlling the asphalt-aggregate ratio in the fine material to obtain said target asphalt-aggregate ratio.

Claim 25. (previously presented) The method as defined in claim 24 in which said controlling step includes the steps of:

- (E) checking the asphalt-aggregate ratio in the fine material; and
- (F) adjusting the ratio of fine material to coarse material resulting from said separating step towards obtaining said target asphalt-aggregate ratio in the fine material.

Claim 26. (previously presented) The method as defined in claim 25 further comprising the steps of:

(E) providing a separating station for accomplishing said separating step, said separation station having an adjustable asphalt-aggregate separation rate; and

(F) adjusting said separation rate towards obtaining said target asphalt-aggregate ratio in the fine material.

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Claim 27. (previously presented) The method as defined in claim 26 in which said separating station includes a screen element positioned at an angle from horizontal, and said adjusting step includes one of:

(i) adjusting the angle of the screen element,

(ii) providing the screen element with variable-sized openings through which the asphalt-aggregate composition falls, and adjusting the size of said openings, and

(iii) providing the screen element with first and second interchangeable screens having different size openings, and selecting one of said first and second screens for use in the screen element during said separating step.

Claim 28. (previously presented) The method as defined in claim 24 in which said controlling step includes the steps of:

(E) checking the asphalt-aggregate ratio in the fine material; and

(F) adding aggregate to the fine material to obtain said target asphalt-aggregate ratio in the fine material.

Claim 29. (previously presented) The method as defined in claim 24 in which said controlling step includes the steps of:

(E) checking the asphalt-aggregate ratio in the fine material; and

(F) adjusting the first maximum size of shredded material resulting from said shredding step towards obtaining said target asphalt-aggregate ratio in the fine material.

Claim 30. (previously presented) The method as defined in claim 24 in which the target asphalt-aggregate ratio of the fine material is approximately 30% to 70% by volume.

Claim 31. (previously presented) The method as defined in claim 24 in which the target asphalt-aggregate ratio of the fine material is approximately 50-50 by weight.

Claim 32. (previously presented) The method as defined in claim 24 in which said separating step includes separating the shredded material into fine material having a maximum size of between one-half (1/2) inch to one and one-half (1 1/2) inches.

Claim 33. (previously presented) The method as defined in claim 24 in which the first maximum size of the shredded material is between approximately one (1) inch to four (4) inches.

Claim 34. (previously presented) The method as defined in claim 33 in which said first maximum size is between approximately two (2) inches to three (3) inches.

Claim 35. (currently amended) A method for processing used and manufacturing scrap asphalt shingle material having an aggregate layer, the method comprising the steps of:

(A) shredding the asphalt shingle material to a first maximum size;

(B) separating the shredded material into (i) fine material having an asphalt-aggregate composition comprising both asphalt pieces and aggregate and (ii) coarse material;

(C) establishing a target ratio of fine material to coarse material; and

(D) controlling the ratio of fine material to coarse material resulting from said separating step to obtain said target ratio.

Claim 36. (previously presented) The method as defined in claim 35 in which said separating step includes separating the shredded material into fine material having a maximum size of between one-half (1/2) inch to one and one-half (1 1/2) inches.

Claim 37. (previously presented) The method as defined in claim 35 in which the first maximum size of the shredded material is between approximately one (1) inch to four (4) inches.

Claim 38. (previously presented) The method as defined in claim 37 in which said first maximum size is between approximately two (2) inches to three (3) inches.

Claim 39. (previously presented) The method as defined in claim 35 in which said controlling step includes the steps of:

(E) checking the ratio of fine material to coarse material resulting from said separating step; and


(F) adjusting the first maximum size of shredded material from said shredding step towards obtaining said target ratio.

Claim 40. (previously presented) The method as defined in claim 35 further comprising the steps of:

(E) providing a separating station for accomplishing said separating step, the separating station having an adjustable fine material separation rate;

(F) checking the ratio of fine material to coarse material resulting from said separating step; and

(G) adjusting said fine material separation rate to obtain said target ratio of fine material to coarse material.



Claim 41. (previously presented) The method as defined in claim 40 in which said separating station includes a screen element positioned at an angle from horizontal, and said adjusting step includes one of:

(i) adjusting the angle of the screen element,

(ii) providing the screen element with variable-sized openings through which the fine material falls, and adjusting the size of said openings, and

(iii) providing the screen element with first and second interchangeable screens having different size openings, and selecting one of said first and second screens for use in said screen element during said separating step.

Claim 42. (currently amended) Apparatus for processing used and manufacturing scrap asphalt shingle material having an aggregate layer, the apparatus comprising:

- (A) a shredding station configured to shred the asphalt shingle material;
- (B) a separating station positioned to receive the shredded material from said shredding station, said separating station being operative to separate the shredded material into (i) fine material having an asphalt-aggregate composition comprising both asphalt pieces and aggregate, and (ii) coarse material;
- (C) a first processing line for receiving said fine material and operative to produce an asphalt-aggregate composition finished-product therefrom; and
- (D) a second processing line receiving said coarse material and operative to produce a second finished-product therefrom.

Claim 43. (previously presented) Apparatus for processing used and manufacturing scrap asphalt shingle material having an aggregate layer, the apparatus comprising:

- (A) a shredding station configured to shred the asphalt shingle material to a maximum size of between approximately one (1) to four (4) inches; and
- (B) a screening station positioned to receive the shredded material from the shredding station, the screening station having an adjustable screening fall-through rate configured to separate the shredded material into (i) fine material having an asphalt-aggregate ratio of one of (a) between approximately 30% to 70% by volume and (b) approximately 50-50 by weight, and (ii) coarse material.

Claim 44. (currently amended) Apparatus for processing used and manufacturing scrap asphalt shingle material having an aggregate layer, the apparatus comprising:

(A) a shredding station configured to shred the asphalt shingle material to a maximum size of between approximately one (1) to four (4) inches; and

(B) a screening station positioned to receive the shredded material from the shredding station, the screening station having an adjustable screening fall-through configured to separate the shredded material into (i) fine material having an asphalt-aggregate composition comprising aggregate and asphalt pieces with a maximum size of between approximately one-half ($1/2$) inch to one and one-half ($1-1/2$) inches, and (ii) coarse material.
